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with global emissions, there is no sound basis, despite the court's comments, for saying that any one project or alternative is preferable to another as a result of lower (or no) CO₂ emissions. Accordingly, the draft EIS properly does not conclude that there are meaningful distinctions with the proposed project and alternatives based on CO₂ emissions.

Finally, in certain circumstances the CEQ regulations require that EISs include a cumulative impact analysis. 40.C.F.R. §§ 1508.7 and 1508.8. Because of the very small quantity of CO₂ emissions produced by a particular project, such as the projects which are the subject of this EIS, a cumulative review of energy projects subject to some form of federal approval would not justify a finding of significant impact. The CO₂ emissions of all such projects would still be so small as to fall well below the significance threshold.

Document 0024

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0023-4

Marshall Magruder
PO Box 1267
Tubac, Arizona 85646
July 30, 2004



Mrs. Ellen Russell
U.S. Department of Energy
Office of Fossil Energy (FE-27)
1000 Independence Avenue, SW
Washington, DC 20585-0301

Subject: **Comments on the Draft Environmental Impact Statement for the Imperial-Mexicali 230-kV Transmission Lines (DOE/EIS-0365) (FE Docket Nos. PP-245 and PP-245) of May 2004**

References:

- (a) Federal Register, Volume 69, May 26, 2004, (69 FR 29934) (extended deadline)
- (b) Federal Register, Volume 69, May 11, 2004, (69 FR 26089) (DEIS NOI)
- (c) DOE letter of May 5, 2004 (no subject)
- (d) DOE letter of May 27, 2004 (no subject)
- (e) My letter of November 30, 2003, "Inputs to the Environmental Impact Statement Scoping Process for Baja California Power and Semptra Energy Resources (FE Docket Nos. PP-245 and PP-245)"

Enclosure:

- (1) Comments on the Draft Environmental Impact Statement for the Imperial Mexicali 230-kV Transmission lines (DOE/EIS-0365)

Dear Mrs. Russell:

1. Summary. This letter forwards comments on the subject document, as announced in the *Federal Register*, in references (a) and (b), as requested by your reference (c) as extended by your reference (d). The scoping inputs submitted on this project are reference (e).
2. Overall, this is an excellent Draft EIS, easy to read and to find the answer to a question or other important information.

Sincerely,

Marshall Magruder

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**Comments on the Draft Environmental Impact Statement
for the
Imperial Mexicali 230-kV Transmission Lines
(DOE/EIS-0365)**

On November 30, 2004, I provided a written input letter, reference (e), on this subject during the National Environmental Protection Act of 1968 (NEPA) Scoping process for this project and compared it to another international U.S.-Mexico Sahuarita to Nogales to Santa Ana, Sonora transmission line project in the Ambos Nogales border area of Arizona and Sonora, Mexico. The comparisons still appear valid; however, it appears that certain routes will not be permitted in the U.S. National Forest.

Nine different scoping issues were identified and recommended to be included in the Imperial Mexicali 230-kV Transmission Line Environmental Impact Statement (EIS). These are used to organize these comments on the Draft EIS (DEIS).

Issue One – Connected Actions.

The "connected actions" discussed in reference (e) were intended for the US and Mexican environmental survey and actions connected on this Imperial Mexicali project. The comments for other projects were not intended as indicated in 2.2.1 of Appendix B, Scoping Summary Report (page 2), "Connected Actions."

An international transmission line requires simultaneous actions on both sides of a common border. The US environmental review process is covered by NEPA and associated Executive Orders and Department of Energy (DOE) policies.

The Mexican environmental review process is covered by the General Law of Ecological Balance and Environmental Protection of 1988¹ (abbreviated at LEEGEPA from its title in Spanish) and associated Regulations and the Secretary of Environment and Natural Resources (SEMARNAT) policies.

The DEIS comment in S.4.2, "Issues outside the Scope of the EIS," (page S-24) and 1.3.2, "Issues outside the Scope of the EIS," (page 1-11) indicates Executive Order 12114 was used to not consider impacts originating in Mexico. That appears to negate much of the value for this and similar border-oriented Environmental Reviews required by NEPA. In fact, it was non-compliance with air pollution controls in Mexico that resulted in the legal arguments that resulted in this EIS. There are definite border-crossing events and use of national processes on both sides of this border, as discussed below, could results achieving the results demanded by NEPA including a long-term CEQ (2000a)² Cumulative Effects Analysis (CEA).

Several of the LEEGEPA Articles discuss the international transmission line requirements for a Mexican Environmental Impact Assessment (EIA) and specify that SEMARNAT policies will overview this processes, very similar to the policies in the United States for a Presidential permit.³

¹ See http://carpetas.semarnat.gob.mx/doeiat/web_ingles/1.shtml for an English version of this law.

² Reference notation from the DEIS are used herein.

³ There are only four Mexican references in this document: CICA, COCEF, EPA (2003d), and ERG, none developed or directly associated with this project. It must be assumed that the SEMARNAT EIA was not considered or consulted or that it has not been completed.

Both of these environmental reviews, the US EIS and Mexican EIA, are required for this project. The elements of analysis are very similar, including, for example, Environmental Justice. Both require that the EIS or EIA be completed prior to project start.

Since the environment is continuous and crosses border lines at will, common understanding and agreements on actions on both sides, by both countries, will permit better and more knowledgeable decisions.

Even without working together, using both environmental review products, side-by-side, will show or display information differences that should be reviewed, assessed and hidden risks evaluated as to their potential environmental impact. In the systems engineering discipline, most problems and highest risks occur at boundaries or interfaces between two systems. The boundary evaluation, which some marketers try to describe as "seamless," only exists after both sides reach knowledgeable decisions.

This Imperial Mexicali transmission line system, which includes generation, transmission and fuel subsystems, with interfaces to air, land and water, that crosses the border, needs to assess all of these, as shown in Table 1 below:

Table 1 – Environmental Impacts for Each of the three subsystems including Cumulative Effects

Imperial Mexicali Subsystem	Interface or Boundary	Environmental Impact (Direct or Indirect)		Cumulative Effects this EIS should consider
		Mexico	United States	
Generation	Air	Direct	Direct	Yes
	Land	Direct	NA	Yes
	Water	Direct	Direct	Yes
Transmission (scope of this EIS)	Air	Direct	Indirect	Yes
	Land	Direct	Direct	Yes
	Water	NA	NA	NA
Fuel (natural gas and gasoline)	Air	Direct	Direct	Yes
	Land	Direct	Direct	Yes
	Water	Direct	Direct	Yes

This table shows potential interaction points between Mexican and US parts of this system, and its three major subsystems.

The Cumulative Effects Analysis (CEA) from the Council for Environmental Quality (CEQ) guide should use both the Mexican ESA and the US EIS. Looking at these, side by side, note the differences and then perform long-term "effects" caused by generation, transmission and fuel on the air, land and water, in particular the impacts of these on all living species, including humans, socio-economic impacts, and the general area impacted by the Imperial Mexicali transmission system. The CEA methodological steps, in 5.1.2 (page 5-2) are proper, however, the definition in 5.3, "Reasonably Foreseeable Future Actions," (page 5-4) pertains only to similar projects and their construction actions, not to population growth, which is significant, in this area.

This bi-national environmental review apparently has not been done as indicated in Appendix B, 2.2.1. Assessments of Impacts in Mexico does not have to be accomplished by DOE and the Bureau of Land Management (BLM), but should be done, as prescribed by Mexican law, through SEMARNAT for International Transmission Systems. Minimal coordination is required; however, some agreements so that synchronization of schedules is necessary.

0024-1

Using the result of this Mexican environmental review in the form of the required EIA, and Table 1 above, then all of the "interfaces" or boundaries can be systematically reviewed to validate and verify completeness of environmental impacts on both sides of the border.

The "reasonably foreseeable future actions, in 5.3 (page 5-4) are very narrowly defined. There were some actions, but in 5.3.7, "General Trends in the Imperial Valley – Mexicali Region" (page 5-12) shows that this is a fast growing area with the Imperial Valley growing 5% in the prior year (page 5-13) and Mexicali at an annual growth rate of 4.9%. As Table 2 shows, the population, at this rate in 10 years will change as follows:

Table 2 –Showing Ten Years Population Growth in the region near this project

Year	Imperial Valley Population		Mexicali Population	
	Population	Annual Change	Population	Annual Change
2003	150,900	1,500 in Calexico	905,000	121,00 since 2000
2004	158,400	7,600	949,300	44,300
2005	166,400	8,000	995,800	46,500
2006	174,700	8,300	1,044,600	48,800
2007	183,400	8,700	1,095,800	51,200
2008	192,600	9,200	1,149,500	53,700
2009	202,200	9,600	1,205,900	55,400
2010	212,300	10,100	1,265,000	59,900
2012	222,900	10,600	1,327,000	61,000
2013	234,000	11,100	1,392,000	65,000
2014	245,800	11,800	1,460,000	68,000
Total Change in 10 years		94,900		555,000

This 10-year growth of 94,900 in the US is greatly overshadowed by the 555,000 on the Mexican side of the border. These 650,000 people in ten years will have significant impacts on demand for water, transportation, energy, food, housing, and work conditions. Assuming similar simple linear decade growths (650,000 / decade), the regional growth will be about 1,300,000 in twenty years and an additional 3,200,000 people in 50-years, then some degree of that population on all infrastructures is critical to understand and for planning. This sizable community may not be exporting electricity; however, several new power plants will be necessary, and water demands stained.

In 5.3.7.1.3, "Precipitation Trends in California" (page 5-13) the 2 to 3 inches of annual rainfall are what makes water critical and vital for life in this area. This population growth here will eventually reach a limit due to water, thus conservation of all water, including any used for exporting electricity out of the region must be considered.

The Imperial Mexicali Transmission system will probably have at least a fifty-year life, thus decisions today will impact this region fifty years from now, with water already being a critical regional resource.

Either a simple or sophisticated forecasting technique should be used for the basic parameters. These parameters include population growth (extrapolated from above), land use changes (agricultural to suburban to urban changes with all these people), technology impacts (efficiency, upgrade), air quality (based on the growth factors), water availability and quality (based on impacts of growth), transportation systems including roads and pipelines, fuel availability for generation, and other key growth factors.

Using either a single forecast or "low", "expected", and "high" forecasts to provide limits on these, then an expected environment can be predicted and assessed for the various Alternatives. The DEIS comments in Appendix B, paragraph 2.2.15 imply that a long-term, say 50-years, Cumulative Effects Analysis, is outside the scope of an EIS.

The referent CEQ (1997b) specifically looks for cumulative effects and ten-years is not adequate. Knowing precise projects, as indicated in DEIS paragraph S.4.2 (p. S-24) is not essential for the analysis discussed above, since long-term forecasts with "low" to "high" limits are used to show future trends. These trends, when beyond 2 or 3 years, is all that can realistically be used; however, very important conclusions and beneficial decisions can be made.

The US Environmental Protection Agency (EPA), Region IX, San Diego Office, has been conducting several studies and active participation along the entire US-Mexican border, including Border Energy Studies in its Border XXI Program. The Region of Interest (ROI) for this project was recently expanded to 100 km on each side of the US-Mexican border. This EPA project has many participants, including all the leading Mexican governmental agencies involved with energy and the environment. None of the US EPA Border XXI documents are found as references.

This leads to the following questions:

- 2.1 What is the status of the Mexican Environmental Impact Assessment for these transmission lines?
- 2.2 If a Mexican Environmental Impact Assessment has not been completed, should the US expect Mexican law to be observed, as they should expect our laws to be followed, thus presenting for and sharing independently derived, national data, so that the bordering countries can consider cross-border environmental impacts? If not, then why hasn't the DOE discussed this issue?
- 2.3 Has the DOE met with SEMARNAT during this EIS process to discuss cross-boundary environmental impacts?
- 2.4 Will the DOE use the US Environmental Protection Agency Region IX "Border XXI" teams to provide information necessary to assess impacts inside of the EPA's 100 km on either side of border study corridor?
- 2.5 Have at least population growth figures, such as in Table 2 above, been considered for 10, 25 and 50-year forecasts for this region?
- 2.6 What will the impact of an additional 3,200,000 people have on the water demand for this region? On the air quality (considering automobiles and industrial needs to support that population)? On the quality of water in the New River and Salton Sea (considering the demand by this population)?
- 2.7 Will the DOE consider the US State Department resources in Mexico to assist in obtaining Mexican government data to assist in the Cumulative Effects Analysis?
- 2.8 Has the Mexican Environmental Impact Assessment been considered in the determination of Environmental Impact and during Cumulative Effects Analysis, if not, why not?
- 2.9 Will the Mexican Environmental Impact Assessment be used and assessed for boundary differences, as discussed above?
- 2.10 During the period for the CEA, will any of the environmental impacts limit growth, such as water? For example, what is the maximum population that the expected water supplies can sustainability support and is that population used in the CEA?
- 2.11 Will the CEA be updated to reflect Mexican projections and US long-term ROI forecasts?

Issue Two – Air Quality Issues.

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The comments in reference (e) recommending monitoring and pollution control equipment were not presented in the DEIS. With the abundance of pollutants from this system, a real-time monitoring system, that would be cross-border oriented, is a minimum mitigation measure. Each kind of emission needs to be continuously monitored at the appropriate site(s) so that real time maps can be presented. It should be noted that in Appendix B, in 2.2.4, "Air Quality" there was not EIS Analysis under the heading "Air Analysis Parameters" thus the DEIS response from DOE and BLM appears incomplete.

Monitored data over time will validate or negate the various computer model outputs used in the DEIS. In fact, the models could be rerun based on a web of air monitoring sites, as a few sites are inadequate to understand the situation. New wireless techniques could be used to network this to a control room, with a few situation displays, with software that alerts operators whenever a national standard (US or Mexican) is being exceeded. SCADA or other networks should be used to communicate with the impacting power plant(s) to make the appropriate operational changes. These 'limits' should be included in the Final EIS (FEIS) with specified monitoring requirements necessary to ensure public health and safety.

Figures 3.3-12, "Salton Sea Air Basin Monitoring Stations ARB Map" and 3.3-13, "Mexico Monitoring Stations ARB Map" (pages 3-54 and 3-55) show existent air quality monitoring stations. The closest two U.S. air quality monitoring sites are 10 and 12 miles to the north and east of the transmission line (page 3-53). The two Mexican air quality monitoring sites are 8 and 11 miles to the east of the transmission line system. There are no sites to the west in either country; however, the prevailing wind shown in Figures 3.3-6, 3.3-7, and 3.3-11 show significant winds from the southwest. This means there will not be downwind monitoring capabilities from the generation plants. Additional analysis is required; however, adequate air quality monitoring appears to include additional stations.

There are mitigation measures in Table S-1 (page S-49) to improve air quality monitoring stations, data collection, display, analysis and consequence management necessary to ensure that all air emitters involved with this project, including those in Mexico are known and required to remain within the appropriate limits.

Assuming that an adequate bi-national air quality monitoring and control system is included as a mitigation measure, data in Table H-4, "Maximum Ground Level Concentrations for a Single Turbine at the TDM and LRPC Power Plants" (page H-9) for hourly and annual impacts by pollutant, to be considered as acceptable monitoring thresholds.

In Table H-6, "Estimated Risk for each Power Plant" (page H-12), for the LRPC (four turbine) High-End entry, is shows that the "Cancer Risk" is 2.00 per million while the Significance threshold is 1 per million. This shows that under these conditions there is an above threshold cancer risk with the LRPC (four turbine) requiring management actions necessary to lower risk. These are not included herein.

Since multiple agencies are involved in Air Quality monitoring, including US, California, and Mexican, the mitigation plan must provide an agreement how these will coordinate and share air quality information with the utilities and associated control centers.

The leads to the following questions:

- 2.1 Will the present air quality-monitoring stations be augmented to account for the significant southwesterly wind flows that cannot be monitored by the present stations?
- 2.2 Do the present air quality monitoring stations provide data in near real time?
- 2.3 What air pollutants does each station monitor and at what frequency?

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- 2.4 Are the present air quality stations adequate to effectively monitor these plants in real time?
- 2.5 Where should additional stations, with what capabilities, be sited to give a total, real time, and air quality picture and where should the air quality station be located?
- 2.6 Is there a cross-border air quality agreement to share such data?
- 2.7 Will the mitigation measures require the US companies to fund, construct, site and continuously monitor a network of air quality monitoring stations at one location to provide a situational awareness picture?
- 2.8 Will the mitigation measure include and specify authorization for the air quality situational awareness station to order power plants to change operational procedures and ordering pollution equipment operations, including ordering plant shutdown, when critical limits are exceeded? If there is not such a mitigation plan, how can there be any assurance that air quality is within standards?
- 2.9 What are the critical parameters from air quality monitoring that should "trigger" alerts or require plant shutdown?
- 2.10 To whom will the applicants report compliance with the primary emissions, secondary air pollutants, and fugitive dust emissions mitigation measures specified in the summary Table S-1 (page S-49) and elsewhere in the DEIS?
- 2.11 What are the management or mitigation actions necessary to reduce the cancer risk for the LRPC (four turbine) facility, as indicated in Table H-6?

Issue Three – Water Use/Quality Issues.

The DEIS does not discuss assured water supply, such as an "assured 100-year supply." This is required in Arizona and a similar requirement must exist in California. Thus, sustainability of water both for use and in quality is essential elements of the water elements impacted by this system.

In the DEIS, Figure 3.2-5, "New River in Mexicali, Mexico" (page 3-13) shows a large number of actual or potential water pollutants along this river, including hog farm discharge, steel recycling plant, and slaughterhouse discharges. Further, the DEIS states in 3.2.1.1.2, "Water Quality" (page 3-12, based on a 1996 report that

"Contaminants of concern detected in water samples from the New River at the U.S.-Mexican border that exceeded comparison values set by the Agency for Toxic Substances and Disease Registry include pathogens (e.g., fecal coliform bacterial, fecal streptococci, E. coli bacteria, and enterococci bacteria), metals (e.g., lead, arsenic, cadmium, thallium, antimony, boron, and manganese), pesticides (e.g., aldrin, chlordane, dichlorodiphenyldichloroethane [DDT], 4,4-DDD, dichlorodiphenyldichloroethylene [DDE], dichlorodiphenyltrichloroethene [DDT], and heptachlor epoxide), and volatile organic compounds (VOC) (e.g., tetrachloroethylene [TCE], methylene chloride, and n-nitro diphenylamine) (DHHS 1996)."

In addition, Table 5.3-2, "TMDL Pollutants and Time Lines for the New River and the Salton Sea," (page 5-10) provides another list of pollutants in the New River and eventually into the Salton Sea.

The New River is not healthy water. This river flows into the United States and near population centers. Recently, in Idaho, the EPA filed a suit against a Canadian mining company for polluting a river that flowed into the U.S. from Canada. Without frequent water measurements all along the New River, effective water safety and health care cannot be monitored or even acted upon. We recently have 25,000,000 gallons of very contaminated water flow from Sonora into Arizona due to a plugged drain (a dead dog) that hazarded thousands in Nogales, Arizona. Unfortunately, the Mexican water gages are not remotely monitored and water sampled by the US in Mexico was only weekly. This is a major issue here and with the International Water Boundary Commission (IBWC). Our Congressman Grijalva made a significant complaint to the IBWC because lack of real time

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monitoring resulted in this flow going on for 48 hours before the Mexican authorities notified the U.S. side of the border. Real time monitoring on both sides of the border is the best solution.

The DEIS carefully notes the changes at two gages, at each end of the US portion of the New River, based on expected "mitigation" proposed by the applicants. There appear to be no equivalent water gages in Mexico. In the Ambos Nogales area, there a US monitored water gages installed on the Mexican side of the Santa Cruz River and used by the Arizona Department of Water Resources for water management in Arizona.

The use of "wet-dry" cooling must not discharge treated water into the already troubled New River, thus the cooling system must recycle all its water, such as accomplished at the C.F.E. Aqua Prieta, Sonora plant.

There supporting rationale for not using "dry" cooling when compared to the "wet-dry cooling" is system discussed on page 2-36. Due to the long-term importance of water for communities on both side of the border, any application of "wet" cooling decreases water resources. Wet-dry cooling should not be an Alternative as the water supply is more valuable than electricity, as only dry cooling will have minimal cumulative effects. The decrease in efficiency on hot days is when others require water more than on cooler days, which lowers the value to this view.

This leads to the following questions:

- 3.1 Are two water gages enough to monitor the New River or should additional gages be installed in Mexico?
- 3.2 How often will the water be sampled for pollutants and where?
- 3.3 Will this provide adequate indicators and warning time, based on known pollutant levels in the New River, for people to be notified and sluice gated be closed to prevent ruining valuable crops?
- 3.4 How much will each of the contaminants be removed by the water treatment processes associated with generation?
- 3.5 Will all treated water be prevented from entering the water table or the New River?
- 3.6 What would be the long-term impacts of the water chemicals added to the electrical plant cooling water if it entered the New River and Salton Sea?
- 3.7 As clean and safe water is an objective for both sides of the border, are the water treatment plants in the US and in Mexico capable of handling and cleaning all of the known pollutants in this river so that the effluent is not hazardous to health? Is there anyway the power plants could contribute to cleaner water than is now present, such as operating sizable distillation plants (at least 100,000 gallons/hour) as a mitigation measure to remove salt and other impurities as an air cooling measure?
- 3.8 What are the specific details in terms of a design trade study, using objective, site-specific numeric data (such as specification sheets) instead of the existing subjective statements on page 2-36 needs to be completed before the DOE and BLM consider the "wet-dry" cooling approach?

Issue Four – Mitigation.

The mitigation measures included in Table S-1 are rather weak in ensuring a safe, healthy and sustainable environment for people and living things on both sides of the border.

This leads to the following questions:

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- 4.1 Can additional air quality monitoring stations be included so that the west and northwest of the transmission line and power plants be adequately monitored?
- 4.2 Can the US and Mexican air quality monitoring stations be networked so that real time air quality monitoring can be assessed on both sides of the border?
- 4.3 Can a co-generation distillation plant, of at least 100,000 gallons per hour, be included with the generators to remove harmful pollutants and salt from the New River? Could this be increased to 1,000,000 gallons of potable water per hour?
- 4.4 Can only "dry" coolers (and any cogeneration options) be installed with the generators?
- 4.5 Can air quality monitors be installed, as a system, to monitor all air pollutants to ensure continual compliance with air quality standards?
- 4.6 Can additional water monitoring stations be installed, including ones in Mexico, along the New River to continuously determine the safety of water?
- 4.7 Does the mitigation plans including bi-national sharing of water and air quality data, including real time monitoring in both countries with both countries receiving the same data?
- 4.8 How will the applicant's compliance with the mitigation measure be monitored, reported and tracked and what will be the consequences when not complying?
- 4.9 What mitigation measures are included to account for the loss of one or more towers, if destroyed by terrorist or a truck hits one and knocks it down?

Issue Five – Need for an Environmental Impact Statement.

A completely compliant EIS will include a bi-national Cumulative Effects Analysis, which DOE has stated is not required. Under Issue 1 above, a suggested approach was suggested.

Issue Six – Other Permitting Requirements.

The transmission line will cross the Pinto Wash, Figure 3.2-21, "FEMA 100-Year Floodplain of Pinto Wash" (page 3033). In Table 9-1, "Federal Environmental Statutes, Regulations and Orders" (page 9-3), indicates the Floodplain Management (EO 11988) reporting is required.

This leads to the following questions:

- 6.1 Has this transmission system been determined by the US Army Corps of Engineers to be "critical facility" and if so, then will the floodplain requirements be changed to "500-year" instead of the "100-year" requirements in section 3.2?
- 6.2 Will a Section 404 report be required?
- 6.3 Will a biological assessment and biological opinion be required for this project for the 19 species listed in 3.4.4, "Special Status Species"?

Issue Seven – Emergency Response Measures.

The risk of sabotage to these transmission lines is real and a possible threat to the distant users, with minimal local personnel. In 1.3.2, "Issues outside the Scope of the EIS," (page 1-11) and in Appendix B, 2.2.9, "Homeland Security" (page 7), the EIS response was the "homeland security issues is beyond the scope of the EIS." Specific response plans, which are probably company private, are not necessary for the responses to the below questions (the bad actor, a terrorist or truck isn't the key concern). The last question is to confirm that the Border Patrol has reviewed this project, and not their response.

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This leads to the following questions:

- 7.1 What are the impacts to the users of each of these two transmission line system if one or more towers was disabled (knocked down) by a terrorist or even a truck hitting it?
- 7.2 How many days would it take to replace a down tower and what alternatives would exist for such a situation?
- 7.3 Would the two applicant's responses be different if such an incident occurred on either side of the border, and if so, what impacts with that have on restoration time?
- 7.4 Has the US Border Patrol been involved in the review of this DEIS?

Issue Eight – System Capabilities.

This issue appears to be closed, as all transmission lines appear to be initially constructed as double-circuits and a second environmental review will not be necessary in future years.

Issue Nine – National Gas and Transmission Line Impacts.

In S.4.2, "Issues outside the Scope of the EIS," (page S-24), in "1.3.2, "Issues outside the Scope of the EIS" (page 1-12) and in Appendix B, 2.2.1, "National Environmental Policy Act (NEPA) Process/Decision Making," (page 3) all state that the nearest natural gasline is more than 50 miles away. The concern was with natural gaslines in Mexico and the criteria of the Gas Technology Institute (GTI) Report 105 concerning minimum separate between electrical and natural gas transmission lines.

The Federal Director of the Office of Pipeline Safety told me that the National Academy of Science was assessing the complex soil resistance (ohms) or conductivity, pipe corrosion, various active and passive cathodic protection schemes, voltage and current at various distances above ground, transmission tower earth-grounding in various soils (desert or dry environments have poorest grounding), and several additional factors to prevent unwanted interactions between gaslines and electrical transmission line systems.

The interactive impacts of passive or active cathodic protection systems, electrostatic discharges and electromagnetic effects should not cause premature failure of the gasline, sparks from vehicles passing under the lines, or induced current traveling through the gasline to unsuspecting users, such as when one turns on a stove to receive a serious shock or to cause an air-natural gas mixture that a spark sets off a significant fuel-explosive. The answer is complex.

The Baja Norte Pipeline and two 230 kV lines appear to run in parallel, where most long-term corrosion damage to the pipelines may occur.

This leads to the following questions:

- 9.1 Are all the transmission lines at the appropriate safe distance from natural gasline, including those in Mexico, so that various interactions are insignificant?

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0024-8

July 30, 2004

Mrs. Ellen Russell
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Dear Mrs. Russell,

This letter is the San Diego- Imperial County chapter of the Sierra Club response to the Draft Environmental Impact Statement for the Imperial- Mexicali 230-kv Transmission Lines (DOE/EIS-0365).

We find the draft has significant deficiencies with regard to the alternatives proposed. The air quality in Imperial County is non-compliant with the Clean Air Act provisions. We feel the cumulative effects of power plants and transmission lines in Imperial County cannot be offset. How do you put a value on the anticipated deaths due to the worsening air quality if these power plants come online? They should never have been built without a proper environmental impact report, including CEQA provisions and cumulative impacts of the power plants in the region, LNG importation and expansion of transmission lines.

We propose an economic study be included to compare a solar manufacturing plant versus a natural gas power plant. This study to include air quality, cost benefit analysis, economic impacts and totals life cycle evaluation of solar generated. If the citizens of Imperial County have to endure electricity generation in their county, then a proper economic analysis needs to be performed.

In addition we find the following incorrect analysis of basic sciences performed by the consultants.

1. Improper AQ analysis by DOE leads DOE to conclusion that PM₁₀ and NO_x emission offsets are not necessary for the power plant emissions.
2. Proper AQ analysis confirms that emission offsets is necessary.

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0025-3

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www.sierraclub.org





San Diego Chapter
Serving the Environment in San Diego and Imperial Counties

Office (619) 299-1743
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3. Appropriate AQ mitigation: A total 733 tons of PM₁₀ emissions and approximately 400 tons of NO_x in Imperial County and Mexicali must be offset to account for PM₁₀ and NO_x emissions from the InterGen (LRPC) and Semptra (TDM) plants.
4. Diversion of low salinity water destined for New River to LRPC and TDM plants results in evaporation of nearly 3.5 billion gallons per year of water (in power plant cooling towers) that would otherwise reduce salinity of New River, and the discharge of nearly 1 billion gallons of high salinity wastewater into the New River.
5. Loss of this flow in the New River will expose nearly 100 additional acres of Salton Sea shoreline and result in up to 100 tons per year of PM₁₀ emissions from the exposed shoreline.
6. The New River exceeds the 4,000 mg/l TDS ceiling established for Colorado River Basin rivers near its terminus prior to entering the Salton Sea. High salinity wastewater discharges from LRPC and TDM plants, ranging from 4,400 to 4,800 mg/l, exacerbate New River exceedances of the 4,000 mg/l TDS ceiling.
7. Appropriate water quality mitigation: Retrofit a dry cooling system to the existing wet cooling system at each plant. Design the parallel "wet-dry" cooling system to reduce water consumption by 90 percent or more over the current wet cooling system. Add a zero liquid discharge system to treat the remaining wastewater to eliminate high salinity wastewater discharge to the New River.
8. Add explicit environmental conditions to the Presidential Permits for LRPC and TDM. Suggested permit conditions are:
 - All PM₁₀ and NO_x emissions must be completely offset within two years of the issuance of an approved Presidential Permit;
 - The DOE will enjoin use of the transmission line(s) at any time the plants are in violation of the air emission limits specified on p. G-3 and p. G-4 of the DEIS;
 - Air monitoring data will routinely/continuously be provided to Imperial County APCD authorities by LRPC and TDM;
 - Averaging time for all air pollutants is 3 hours;
 - Consumptive water use is limited to 717 acre-ft/yr at LRPC and 350 acre-ft/yr at TDM;
 - Data from an approved flow monitor must be routinely provided to the Regional Board to verify water consumption;
 - Discharge of wastewater to the New River that has not been treated for salinity removal is prohibited.

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We would like to work with the Department of Energy to perform an economic study of the benefits of solar generation of electricity versus natural gas generated electricity. We feel serious consideration should be given for denying an operating permit. If a permit is issued significant offsets should be provided to Imperial County with community input as to how this should be accomplished. This will help lead to reducing our dependence on foreign oil and provide clean renewable energy for generations to come.

Sincerely,

Kenneth M. Smokoska
Air Quality Committee - Chair

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Document 0026

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Page 1 of 2

Russell, Ellen

From: mdoyle1000 [mdoyle1000@cox.net]
Sent: Friday, July 30, 2004 12:12 PM
To: Russell, Ellen
Subject: Semptra/Intergen Power Lines DEIS

July 29, 2004

Mrs. Ellen Russell
Fossil Energy FE-27
U.S. Department Of Energy
1000 Independence Ave. SW
Washington DC 20585-0350

Dear Mrs. Russell,

I'm writing in response to the Draft Environmental Impact Study (DEIS) concerning the new 230KV Mexicali/Imperial Substation power transmission lines Connecting Intergen's LRPC and Semptra's TDM plants to the US grid.

First, I am outraged that this project was approved and constructed before a DEIS was issued, much less reviewed. Such a backwards process is not permissible. Any major projects must be carefully reviewed for environmental impacts prior to construction. The local desert ecology is extremely sensitive. If those charged with its protection fail in their duties, none of it will survive. Additionally, this region is rich in Native American cultural sites, which also require protection from major construction projects.

Second, I believe that fact that the transmission lines have already been built does not preclude the implementation of a number of measures to reduce their impact. I strenuously urge the following:

1. Upgrade emission controls:

The proximity to the United States of the power generation sources connected to these lines means that the emission from these sources will affect the air quality in adjacent US areas. The obvious target of the output of these plants is the Southern California market. Taken together, these make the project equivalent to any new US power plant project. In my view this requires that the strictest current emission standards be applied. I call on you to make the license to operate these transmission lines conditional on the installation and maintenance of the equipment meeting highest emission standards listed in the DEIS.

2. Cooling technology:

I urge the use of dry or wet-dry cooling technology to reduce impacts on the stressed water supply in the

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area. According to experts in the field, the efficiency penalty for using these cooling technologies is a fraction of that stated in the DEIS.

3. FTHL management plan:

The Flat-Tailed Horned Lizard, a soon to be listed endangered species, is native to the region. I call on DOE to require mitigation measures commiserate with the sensitivity of this rare specie, and to encourage BLM to develop a true management plan to deal with this problem.

Thank you for incorporating my comments into the discussion and record.

Regards,

Mark Doyle
4804 50th ST
San Diego, CA 92115
619-229-9103

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(cont.)

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0026-2

0026-3

8/16/2004

Comment and Response Document

Imperial-Mexicali FEIS

2-212

December 2004

0028-1

Document 0028

Dear Ms. Russell,
I believe it is important that energy producers outside the United States meet our environmental standards. Please make sure the environment is protected fully.
Thank You
Martin Pleasant

0027-1

Document 0027

Ms. Ellen Russell

Dear Ms. Russell,

I am very concerned about U.S. power plant developers taking advantage of less stringent standards in Mexico to profit at the expense of public health and the environment. I ask that the Department of Energy require that Semptra Energy and Intergen mitigate the impacts of their power plants before granting presidential permits, and that DOE condition any permits on mitigation.

Communities along the U.S.-Mexico border suffer from poor air quality and scarcity of clean water. Imperial County, California, has the highest childhood asthma rate in the state. Pulmonary sickness rates are also elevated in Mexicali, a city of 600,000 just south of Imperial County in Mexico.

The draft EIS prepared by DOE for these two power plants clearly identifies significant air and water impacts, while at the same time concluding that these impacts do not reach a sufficient level of significance to require mitigation. DOE misapplies U.S. air quality regulations, ignores the Colorado River Basin water quality ceiling of 4,000 mg/l salinity, and ignores impacts in Mexico when inclusion of these impacts further demonstrates the need for impact mitigation and conditional permitting.

DOE should not place the economic interests of U.S. power developers ahead of the public health of U.S. and Mexican citizens living in the vicinity of these plants, nor ahead of the need to protect the New River, an important source of fresh water for the Salton Sea National Wildlife Refuge. I urge you to craft adequate air and water quality mitigation measures in the final EIS and in any permits based thereon, that effectively address the air and water quality impacts caused by these two power plants.

Sincerely,

Carole Levenson
492 Staten Avenue #1103
Oakland, California 94610

0030-1

Document 0030

Dear Energy Secretary Spencer Abraham c/o Mrs. Ellen Russell

Energy Secretary Spencer Abraham,

The majority of California residents, along with Greenpeace, are demanding clean renewable resources, but multinational corporations are pressuring both States to invest in foreign liquid natural gas that could fuel an explosion of dirty power plants on the border. Instead, the U.S. and Mexican governments should be working to bring clean renewable energy to Mexico and the California.

The residents of the California and Mexico border deserve clean renewable energy sources. These populations suffer from poor air quality and scarcity of water. Imperial County, California has by far the highest childhood asthma rates in the State. Pulmonary sickness rates are also elevated in Mexicali, a city of 600,000 just south of Imperial County. The county is a Federal non-attainment area for PM10 and ozone. Air monitoring data available for Mexicali show the city's air quality is at least as bad as conditions in Imperial County. DOE's failure to insist on emission offsets for nitrogen oxide (NOx) and PM10 emissions from Interge's La Rosita Power Complex (LRPC) and Sempra's Termoelectrica de Mexicali (TDM), threatens the health and well being of communities on both sides of the border. Adequate air and water quality mitigation measures must be included in the final EIS to effectively address the air and water quality impacts caused by the LRPC and TDM power plants.

The recent scandal involving Interge's misrepresentation of its environmental practices indicates that Presidential Permits should not be granted. Interge displayed its complete disregard for the pollution control commitments made to the DOE by failing to install advanced smog controls on one of its two export units at the time of commercial startup (June 2003). When local communities discovered Interge's failure, the result was a two month forced shutdown of the unit, which ended only when the appropriate pollution control system was installed. The uncontrolled unit generated hundreds of tons of NOx beyond what the DOE estimated when initially granting a Presidential Permit that allowed Interge to transmit power to the U.S. While the situation has now been corrected, the damages done while the plant was operating without meeting environmental standards are reprehensible. The

0029-1

Document 0029

Ellen Russell
NEPA Document Manager
Office of Fossil Energy (FE-27)
U.S. Department of Energy
1000 Independence Avenue, SW.
Washington, DC 20585-0350

Dear Ellen Russell,

I am very concerned about U.S. power plant developers taking advantage of less stringent environmental standards in Mexico to profit at the expense of public health and the environment. I ask that the Department of Energy (DOE) require that Sempra Energy and Interge mitigate the impacts of their power plants before being granted presidential permits, and that DOE condition any permits on mitigation.

Communities along the U.S.-Mexico border already suffer from poor air quality and scarcity of clean water. Imperial County, California, has the highest childhood asthma rate in the state. Pulmonary sickness rates are also elevated in Mexicali, a city of 600,000 just south of Imperial County in Mexico. The DOE's failure to insist on emission offsets for nitrogen oxide (NOx) and particulate emissions from Interge's La Rosita Power Complex and Sempra's Termoelectrica de Mexicali threatens the health and well-being of highly stressed communities on both sides of the border.

The draft Environmental Impact Statement (EIS) prepared by the DOE for these two power plants clearly identifies significant air and water impacts, while at the same time concludes that these problems do not reach a sufficient level of significance to require mitigation. The DOE misapplies U.S. air quality regulations, ignores the Colorado River Basin water quality ceiling of 4,000 mg/l salinity, and ignores impacts in Mexico when inclusion of these effects further demonstrates the need for mitigation and conditional permitting.

The DOE should not place the economic interests of U.S. power developers ahead of the public health of U.S. and Mexican citizens, nor ahead of the need to protect the New River, an important source of fresh water for the Salton Sea National Wildlife Refuge. I urge you to craft adequate air and water quality mitigation measures in the final EIS and in any permits based upon them.

Sincerely,